XIX. *Animal and Vegetable Physiology, considered with reference to Natural Theology.* By Peter Mark Roget, M. D. Secretary to the Royal Society, Fullerian Professor of Physiology in the Royal Institution of Great Britain, Vice President of the Society of Arts, Fellow of the Royal College of Physicians, Consulting Physician to the Queen Charlotte's Lying-in Hospital, and to the Northern Dispensary, &c. &c. Vol. I. pp. 593. Vol. II. pp. 661.

This is decidedly, we think, the best of the Bridgewater Treatises that relate directly or indirectly to medical science. Dr. Roget has been known for many years as a prosecutor of physiology, and a zealous investigator of physical laws and phenomena. He was accordingly well worthy of selection for the author of a treatise on comparative physiology.

"The object of this treatise," says Dr. Roget, in his preface, "is to enforce the great truths of natural theology, by adducing those evidences of the power, wisdom, and goodness of God, which are manifested in the living creation. The scientific knowledge of the phenomena of life, as they are exhibited under the infinitely varied forms of organization, constitutes what is usually termed Physiology, a science of vast and almost boundless extent, since it comprehends within its range all the animal and vegetable beings on the globe. This ample field of inquiry has, of late years, been cultivated with extraordinary diligence and success by the naturalists of every country: and from their collective labours there has been now amassed an immense store of facts, and a rich harvest of valuable discoveries. But in the execution of my task this exuberance of materials was rather a source of difficulty; for it created the necessity of more careful selection and of a more extended plan.

"In conformity with the original purpose of the work, which I have all along endeavoured to keep steadfastly in view, I have excluded from it all those particulars of the natural history both of animals and of plants, and all description of those structures of which the relation of final causes cannot be distinctly traced; and have admitted only such facts as afford manifest evidences of design. These facts I have studied to arrange in that methodized order, and to unite in those comprehensive generalizations, which not only conduce to their more ready disquisition and retention in the memory, but tend also to enlarge our views of their mutual connexions, and of their subordination to the general plan of creation. My endeavours have been directed to give to the subject that unity of design, and that scientific form, which are generally wanting in books professedly treating of natural theology, published prior to the present series; not excepting even the unrivalled and immortal work of Paley. By furnishing those general principles, on which all accurate and extensive knowledge must substantially be founded, I am not without a hope that this compendium may prove a useful introduction to the study of natural history: the pursuit of which will be found not only to supply inexhaustible sources of intellectual gratification, but also to furnish to contemplative minds, a rich fountain of religious instruction. To render these benefits generally accessible, I have confined myself to such subjects as are adapted to every class of readers; and, avoiding all unnecessary extension of the field of inquiry, have wholly abstained from entering into historical accounts of the progress of discovery: contenting myself with an exposition of the present state of the science. I have also scrupulously refrained from treading in the paths, which have been prescribed to the other authors of these treatises; and have accordingly omitted all consideration of the hand, the voice, the chemical theory of digestion, the habits and instincts of animals, and to structures of antediluvian races; the extent of the field which remained, and which, with these few exceptions, embraces nearly the whole of the physiology of the two kingdoms of nature, already affording ample occupation for a single labourer." p. 11.

Yet these very omissions prevent the work from being considered as an outline of the whole subject. The assignment, indeed, of branches of the same department to different individuals, has interfered largely with the value of some of the "treatises;" whilst others—as that of the "hand," assigned to Sir Charles Bell—have been but little restricted to their objects, and have been expanded into treatises on certain topics of natural history but little connected with the subject.

The medical, as well as the general, student is usually but little acquainted with the first principles of natural history. To him Dr. Roget's work will be a valuable introduction. To the American reader it will soon be easily accessible, as, notwithstanding the expense of the illustrations, the enterprising publishers of the former "Treatises" have determined upon reprinting this.

The number of the wood-cuts is upwards of 460. To the first volume is prefixed an outline of Cuvier's classification of animals, with examples of animals belonging to each division.

R. D.

XX. *Traité de Physiologie Médicale et Philosophique.* Par Alm. Lepelletier, de la Sarthe. Experientia veritas. Quatre volumes in 8, avec 11 planches et des tableaux synoptiques. Tome quatrième. Paris, 1833. pp. 588.

A Treatise on Medical and Philosophical Physiology. By Alm. Lepelletier, de la Sarthe, &c. &c. Vol. IV.

The concluding volume of this work does not lead us to modify the sentiments, which we expressed regarding its precursors.* It is, on the whole, a singular production;—interesting in many of its relations, and comprising much useful matter, but by no means adapted for serving either as a sketch, or as a system of physiology. Upwards of three hundred pages of the third volume are devoted to the consideration of the intellectual and moral faculties. The author is evidently partial to psychological investigations, and one of the main faults of the work, is, that it contains more metaphysics than physics.

Two hundred and sixty-four pages of the volume before us are occupied with the consideration of the remaining "*Functions of Relation,*"—including the "Functions of Expression." The remainder embraces the physiology of the "genital functions," the "history of life"—"considerations on death"—"chemical decomposition of the organism," and, lastly, the "natural theory of the human races." What shall we say of the following specimen of credulity, which we find under the last head?

"Shall we speak of those sea men referred to by naturalists under the names Ambirs, Sirens, Tritons, and Nereids? Their existence seems to me to be admissible only in fable. Some individuals, who have lived in the midst of the seas, like the amphibia and fishes, have imposed upon naturalists in an age not very remote from our own. But it is sufficient to examine the principal traits of their history to discover, that every one of them, in place of being a Neptune with azure locks, was simply an individual of our own species, wonderfully gifted with the faculty of swimming. We also shall relate some examples of this singular peculiarity.

"A Sicilian, named Nicolas, born at Catania, of poor parents, had such an inclination and taste for living in the midst of the waters, that he could not pass

* No. XXII. for February 1833, p. 472.